



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q67358

Satoshi HANADA, et al.

Appln. No.: 09/994,641

Group Art Unit: 1732

Confirmation No.: 7730

Examiner: Allan R. Kuhns

Filed: November 28, 2001

For: POLYOLEFIN RESIN FOAMED SHEET AND PRODUCTION METHOD THEREOF

RESPONSE UNDER 37 C.F.R. § 1.111

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The Response is submitted in reply to the Office Action dated September 3, 2003, please amend the above-identified application as follows on the accompanying pages. A petition for extension of time is submitted herewith.

REMARKS

Claims 1-6 are all the claims pending in the application.

Claims 1-3 are withdrawn from consideration.

A telephone restriction requirement was issued on February 3, 2004.

Applicants confirm the election of Group II, claims 4-6, drawn to a method of producing a polyolefin resin foamed sheet.

Claims 4-6 have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite.

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RESPONSE UNDER 37 CFR 1.111
U.S. APPLN. NO. 09/994,641

Applicants submit that the Examiner mistakenly characterizes “polyolefin having long chain branch” in claims 4-6 as indefinite. Applicants define “polyolefin having long chain branch” as “a polyolefin resin having a branching index [A] satisfying $0.20 \leq [A] \leq 0.98$.” See page 7, paragraph 4. Further, Applicants state that “the branching index indicates the extent of long chain branching.” See page 8, paragraph 2. Applicants submit that the term “long” refers to a branching index [A], in which [A] is defined as $0.20 \leq [A] \leq 0.98$. Therefore, Applicants submit that the chain length of the “polyolefin having long chain branch” in claims 4-6 is not vague or unclear because the term is defined in the specification as discussed above. Applicants, therefore, request that the Examiner withdraw the § 112 rejection of claims 4-6.

Claim 4 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Eslinger et al. (“Eslinger”).

Eslinger states that the reason why virgin plastic material is used for the outer non-foamed layers is that surface appearance of the sheet is critical, and contaminated recycled plastic is generally not used because of the potential in blemishing the non-foamed layers. See Eslinger et al., column 3, lines 55-62.

Applicants submit that the presently claimed invention uses virgin plastic material for the foamed layer and 10% by weight or more recycled material for the non-foamed layer. Applicants submit that there is no suggestion in Eslinger to use recycled material for the non-foamed layers as described in Applicants’ claimed invention. On the contrary, Applicants submit that Eslinger “teaches away” from using recycled material for the non-foamed layers

RESPONSE UNDER 37 CFR 1.111
U.S. APPLN. NO. 09/994,641

because of the potential of blemishing. Therefore, Applicants submit that it would not be obvious to use recycled material in the non-foamed layer in view of the disclosure of Eslinger.

In addition, Applicants submit that in the presently claimed invention recycled material is used to form a small unevenness in thickness in the non-foamed layer that prevents the foam break in creating the foamed layer and produces a foam sheet with excellent surface appearance. Applicants submit Eslinger discloses using the recycled material in the foamed layer. Thus, Applicants submit that it would not have been obvious in view of Eslinger to use recycled material in the non-foamed layer.

It is asserted that the recycled material of Eslinger has experienced at least two melting and solidifying cycles. It is also asserted that Applicants' claimed weight-average molecular weight is a low weight average molecular weight for polyolefinic material involved in melt processing and is within the purview Eslinger.

Applicants submit that the recycled material in Eslinger does not experience "at least two melting and solidifying cycles." Applicants also submit that Eslinger does not disclose any weight-average molecular weight for polyolefinic material. Therefore, Applicants submit that the presently claimed "melting-solidification process" and the claimed molecular weight is not within the purview of Eslinger.

Applicants, therefore, respectfully request that the Examiner withdraw the § 103 rejection of claim 4 based on Eslinger.

It is asserted that "10,000 is a relatively low weight average molecular weight for polyolefinic material involved in melt processing."

RESPONSE UNDER 37 CFR 1.111
U.S. APPLN. NO. 09/994,641

Applicants respectfully traverse this statement. Applicants submit that Applicants' claim a weight-average molecular weight of 1×10^5 (100,000) or more. Therefore, Applicants submit the Examiner's comment with respect to a weight average molecular weight of 10,000 has no bearing on claims 4-6.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.


Respectfully submitted,

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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CUSTOMER NUMBER


Jennifer R. Leach
Registration No. 54,257

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